

Exhibit 25

MORGAN, LEWIS & BOCKIUS LLP
Daniel Johnson, Jr. (State Bar No. 57409)
Brett M. Schuman (State Bar No. 189247)
Amy M. Spicer (State Bar No. 188399)
One Market, Spear Street Tower
San Francisco, CA 94105-1126
Tel: 415.442.1000
Fax: 415.442.1001
djjohnson@morganlewis.com
bschuman@morganlewis.com
aspicer@morganlewis.com

MORGAN, LEWIS & BOCKIUS LLP
Andrew J. Wu (State Bar No. 214442)
Yalei Sun (State Bar No. 242256)
2 Palo Alto Square
3000 El Camino Real, Suite 700
Palo Alto, CA 94306-2122
Tel: 650.843.4000
Fax: 650.843.4001
awu@morganlewis.com
ysun@morganlewis.com

Attorneys for Plaintiffs and Counterdefendants
ALPHA & OMEGA SEMICONDUCTOR, LTD.
ALPHA & OMEGA SEMICONDUCTOR, INC.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

ALPHA & OMEGA SEMICONDUCTOR,
LTD., a Bermuda corporation; and
ALPHA & OMEGA SEMICONDUCTOR,
INC., a California corporation,

Plaintiffs and Counterdefendants,

v.

FAIRCHILD SEMICONDUCTOR
CORP., a Delaware corporation,

Defendant and Counterclaimant.

AND RELATED COUNTERCLAIMS.

Case No. C 07-2638 JSW
(Consolidated with Case No. C-07-2664 JSW)

**AOS'S SUPPLEMENTAL PRELIMINARY
INVALIDITY CONTENTIONS FOR U.S.
PATENT NOS. 6,429,481, 6,521,497,
6,710,406, 6,828,195, 7,148,111, AND
6,818,947 PURSUANT TO PATENT L.R. 3-
3**

1 Plaintiffs and Counterdefendants Alpha & Omega Semiconductor, Ltd. and Alpha &
 2 Omega Semiconductor, Inc. (collectively, "AOS") hereby provide the following supplemental
 3 invalidity claim charts for six asserted U.S. Patents, including U.S. Patent Nos. 6,429,481 ("the
 4 '481 Patent"), 6,521,497 ("the '497 Patent"), 6,710,406 ("the '406 Patent"), 6,828,195 ("the '195
 5 Patent"), and 7,148,111 ("the '111 Patent"), which are collectively referred to as "the Mo
 6 Patents," and U.S. Patent No. 6,818,947 ("the '947 Patent"), pursuant to Patent L.R. 3-3 and the
 7 stipulated schedule in response to the two Disclosures of Asserted Claims and Preliminary
 8 Infringement Contentions prepared by Fairchild Semiconductor Corporation ("Fairchild").

9 For each asserted claim of the six asserted Fairchild Patents, AOS hereby: (1) identifies
 10 each prior art reference that either anticipates the claim or renders the claim obvious; (2)
 11 identifies where within each prior art reference each claim element is found; and (3) identifies
 12 whether these prior art references anticipate the claim or render the claim obvious and identifies
 13 combinations of prior art references that render the claim obvious.

14 As an initial matter, AOS notes that AOS is providing these invalidity claim charts while
 15 discovery from Defendant and Counterclaimant Fairchild is still ongoing. In particular, Fairchild
 16 has not provided complete discovery in response to AOS's interrogatories and requests for
 17 production relating to the six asserted Fairchild Patents. Depositions of persons involved in the
 18 drafting and prosecution of the asserted Fairchild patents will likely reveal more information that
 19 affects the conclusions herein. In addition, the Court has not yet construed the claims. Fairchild
 20 has not yet disclosed its theories of infringement; in particular, Fairchild has not yet disclosed its
 21 theories regarding certain recited properties of the claim elements. Accordingly, AOS reserves
 22 the right to supplement this response chart as it obtains further discovery from Fairchild or as
 23 otherwise permitted by the Court or the applicable rules.

24 **I. Patent Local Rule 3-3 Response Chart**

25 **A. Identification of Prior Art**

26 Presently, AOS intends to at least rely upon the following prior art patents and references:

- 27 • U.S. Patent No. 4,374,455
- 28 • U.S. Patent No. 5,072,266

- 1 • U.S. Patent No. 5,233,215
- 2 • U.S. Patent No. 5,268,586
- 3 • U.S. Patent No. 5,316,959
- 4 • U.S. Patent No. 5,349,224
- 5 • U.S. Patent No. 5,352,915
- 6 • U.S. Patent No. 5,405,794
- 7 • U.S. Patent No. 5,430,324
- 8 • U.S. Patent No. 5,460,985
- 9 • U.S. Patent No. 5,527,720
- 10 • U.S. Patent No. 5,597,765
- 11 • U.S. Patent No. 5,629,543
- 12 • U.S. Patent No. 5,674,766
- 13 • U.S. Patent No. 5,689,128
- 14 • U.S. Patent No. 5,701,023
- 15 • U.S. Patent No. 5,814,858
- 16 • U.S. Patent No. 5,864,159
- 17 • U.S. Patent No. 5,877,528
- 18 • U.S. Patent No. 5,910,669
- 19 • U.S. Patent No. 5,930,630
- 20 • U.S. Patent No. 5,998,833
- 21 • U.S. Patent No. 5,998,836
- 22 • U.S. Patent No. 6,031,265
- 23 • U.S. Patent No. 6,118,150
- 24 • U.S. Patent No. 6,404,025
- 25 • U.S. Patent No. 6,838,722
- 26 • European Patent Application No. 0159663
- 27 • Japanese Patent Application No. 1995066395
- 28 • Japanese Patent Application No. 1998214968

- 1 • Sze, S. M., “Physics of Semiconductor Devices,” 2nd Ed., Bell Laboratories, 1981
- 2 (“the Sze book”)
- 3 • Baliga, B. Jayant, “Power Semiconductor Devices,” PWS Publishing Company,
- 4 1996 (“the Baliga book”)
- 5 • Grant, D.A., Gowar, J., “Power MOSFETs: Theory and Applications,” A. Wiley-
- 6 Interscience Publication, 1989 (“the Grant book”)

7 Additionally, AOS intends to rely on the inventor admissions made in the six asserted

8 Fairchild Patents relating to the scope of prior art teaching, including but not limited to: U.S.

9 Patent No. 6,429,481 and its Prosecution History; U.S. Patent No. 6,521,497 and its Prosecution

10 History; U.S. Patent No. 6,710,406 and its Prosecution History; U.S. Patent No. 6,828,195 and its

11 Prosecution History; U.S. Patent No. 7,148,111 and its Prosecution History; U.S. Patent No.

12 6,818,947 and its Prosecution History; as well as any patent applications filed in any other

13 jurisdictions (including PCT applications) that are related to any of the six asserted Fairchild

14 patents and their respective prosecution histories. AOS also reserves the right to rely upon other

15 prior art uncovered during the course of discovery including, for example, Fairchild’s own sales,

16 offers for sale, use, or disclosures prior to the invention dates of the asserted Fairchild Patents.

17 **B. Identification of Asserted Claim Elements of the Six Asserted Fairchild**

18 **Patents in Prior Art**

19 Presented below are locations within each listed prior art reference of the various elements

20 of the asserted claims of the six asserted Fairchild Patents. Although specific references are

21 made, each particular reference may contain additional discussion of a given claim element at

22 other locations. Thus, the following description is made in an effort to identify each claim

23 element as being contained in the respective references and is not intended to be an exhaustive

24 listing of all teachings of a particular claim element within each prior art reference. AOS reserves

25 the right to contend that other claims of the asserted Fairchild Patents are invalid; for example, if

26 Fairchild amends its infringement contentions to assert other claims, AOS reserves the right to

27 assert invalidity of those claims.

28

1 combinations of prior art that render the six asserted Fairchild Patents obvious in connection with
 2 further discovery, claim construction, the parties' exchange of expert reports, and as appropriate
 3 under Patent L.R. 3-6.

4 **D. Additional Invalidity Claims against the Six Asserted Fairchild Patents**

5 Besides the invalidity claims listed above under 35 U.S.C. §§102 and 103, AOS hereby
 6 asserts the following invalidity defenses against the six asserted Fairchild Patents under 35 U.S.C.
 7 §112. AOS reserves the right to revise and/or amend the following defenses pursuant to Federal
 8 Rule of Civil Procedure 26(e) and the Orders of record in this matter to the extent appropriate in
 9 light of further investigation and discovery regarding the defenses, the Court's construction of the
 10 claims at issue, and the review and analysis of expert testimony.

11 **1. The '481 Patent**

- 12 **a.** All asserted claims of the '481 Patent are invalid under 35 U.S.C.
 13 §112, ¶1 for failing to meet the written description requirement
 14 with respect to the term "abrupt junction;"
- 15 **b.** All asserted claims of the '481 Patent are invalid under 35 U.S.C.
 16 §112, ¶1 for failing to meet the enablement requirement with
 17 respect to the term "abrupt junction;"
- 18 **c.** All asserted claims of the '481 Patent are invalid under 35 U.S.C.
 19 §112, ¶2 because the term "abrupt junction" renders the claims
 20 indefinite;
- 21 **d.** Claims 1-5 and 18-20 of the '481 Patent are invalid under 35
 22 U.S.C. §112, ¶1 for failing to meet the written description
 23 requirement with respect to the phrase "the depth of the junction,
 24 relative to the depth of the well, is adjusted so that a transistor
 25 breakdown initiation point is spaced away from the trench in the
 26 semiconductor;"
- 27 **e.** Claims 1-5 and 18-20 of the '481 Patent are invalid under 35
 28 U.S.C. §112, ¶1 for failing to meet the enablement requirement

1 with respect to the phrase “the depth of the junction, relative to the
2 depth of the well, is adjusted so that a transistor breakdown
3 initiation point is spaced away from the trench in the
4 semiconductor;”

- 5 **f.** Claims 1-5 and 18-20 of the ‘481 Patent are invalid under 35
6 U.S.C. §112, ¶2 because the phrase “the depth of the junction,
7 relative to the depth of the well, is adjusted so that a transistor
8 breakdown initiation point is spaced away from the trench in the
9 semiconductor” renders the claims indefinite;
- 10 **g.** Claims 6-14 and 21 of the ‘481 Patent are invalid under 35 U.S.C.
11 §112, ¶1 for failing to meet the written description requirement
12 with respect to the phrase “a depth of the heavy body relative to a
13 depth of the well is adjusted so that breakdown of the transistor
14 originates in the semiconductor in a region spaced away from the
15 trenches when voltage is applied to the transistor;”
- 16 **h.** Claims 6-14 and 21 of the ‘481 Patent are invalid under 35 U.S.C.
17 §112, ¶1 for failing to meet the enablement requirement with
18 respect to the phrase “a depth of the heavy body relative to a depth
19 of the well is adjusted so that breakdown of the transistor originates
20 in the semiconductor in a region spaced away from the trenches
21 when voltage is applied to the transistor;”
- 22 **i.** Claims 6-14 and 21 of the ‘481 Patent are invalid under 35 U.S.C.
23 §112, ¶1 for failing to meet the written description requirement
24 with respect to the phrase “a depth of the heavy body relative to a
25 depth of the well is adjusted so that breakdown of the transistor
26 originates in the semiconductor in a region spaced away from the
27 trenches when voltage is applied to the transistor” renders the
28 claims indefinite;

- 1 **j.** Claims 15-17 and 22 of the '481 Patent are invalid under 35 U.S.C.
2 §112, ¶1 for failing to meet the written description requirement
3 with respect to the phrase “a depth of the heavy body junction
4 relative to a maximum depth of the well, is adjusted so that a peak
5 electric field in the substrate is spaced away from the trench when
6 voltage is applied to the transistor;”
- 7 **k.** Claims 15-17 and 22 of the '481 Patent are invalid under 35 U.S.C.
8 §112, ¶1 for failing to meet the enablement requirement with
9 respect to the phrase “a depth of the heavy body junction relative to
10 a maximum depth of the well, is adjusted so that a peak electric
11 field in the substrate is spaced away from the trench when voltage
12 is applied to the transistor;”
- 13 **l.** Claims 15-17 and 22 of the '481 Patent are invalid under 35 U.S.C.
14 §112, ¶2 because the phrase “a depth of the heavy body junction
15 relative to a maximum depth of the well, is adjusted so that a peak
16 electric field in the substrate is spaced away from the trench when
17 voltage is applied to the transistor” renders the claims indefinite;
- 18 **m.** Claim 22 of the '481 Patent is invalid under 35 U.S.C. §112, ¶1 for
19 failing to meet the written description requirement with respect to
20 the phrase “the second depth relative to a depth of the well is
21 adjusted to eliminate the need for any layers disposed between the
22 epitaxial layer and the substrate;”
- 23 **n.** Claim 22 of the '481 Patent is invalid under 35 U.S.C. §112, ¶1 for
24 failing to meet the enablement requirement with respect to the
25 phrase “the second depth relative to a depth of the well is adjusted
26 to eliminate the need for any layers disposed between the epitaxial
27 layer and the substrate;” and
28

- 1 o. Claim 22 of the '481 Patent is invalid under 35 U.S.C. §112, ¶2
2 because the phrase "the second depth relative to a depth of the well
3 is adjusted to eliminate the need for any layers disposed between
4 the epitaxial layer and the substrate" renders the claims indefinite.

5 **2. The '406 Patent**

- 6 a. All asserted claims of the '406 Patent are invalid under 35 U.S.C.
7 §112, ¶1 for failing to meet the written description requirement
8 with respect to the term "abrupt junction;"
- 9 b. All asserted claims of the '406 Patent are invalid under 35 U.S.C.
10 §112, ¶1 for failing to meet the enablement requirement with
11 respect to the term "abrupt junction;"
- 12 c. All asserted claims of the '406 Patent are invalid under 35 U.S.C.
13 §112, ¶2 because the term "abrupt junction" renders the claims
14 indefinite;
- 15 d. Claims 1-12 of the '406 Patent are invalid under 35 U.S.C. §112, ¶1
16 for failing to meet the written description requirement with respect
17 to the phrase "a location of the abrupt junction relative to the depth
18 of the well is adjusted so that a transistor breakdown initiation point
19 is spaced away from the trench in the semiconductor;"
- 20 e. Claims 1-12 of the '406 Patent are invalid under 35 U.S.C. §112, ¶1
21 for failing to meet the enablement requirement with respect to the
22 phrase "a location of the abrupt junction relative to the depth of the
23 well is adjusted so that a transistor breakdown initiation point is
24 spaced away from the trench in the semiconductor;"
- 25 f. Claims 1-12 of the '406 Patent are invalid under 35 U.S.C. §112, ¶2
26 because the phrase "a location of the abrupt junction relative to the
27 depth of the well is adjusted so that a transistor breakdown
28

initiation point is spaced away from the trench in the semiconductor” renders the claims indefinite;

g. Claims 13-32 of the ‘406 Patent are invalid under 35 U.S.C. §112, ¶1 for failing to meet the written description requirement with respect to the phrase “the depth of the heavy body relative to a depth of the well is adjusted so that breakdown of the transistor originates in the semiconductor in a region spaced away from the trenches when voltage is applied to the transistor;”

h. Claims 13-32 of the ‘406 Patent are invalid under 35 U.S.C. §112, ¶1 for failing to meet the enablement requirement with respect to the phrase “the depth of the heavy body relative to a depth of the well is adjusted so that breakdown of the transistor originates in the semiconductor in a region spaced away from the trenches when voltage is applied to the transistor;” and

i. Claims 13-32 of the ‘406 Patent are invalid under 35 U.S.C. §112, ¶2 because the phrase “the depth of the heavy body relative to a depth of the well is adjusted so that breakdown of the transistor originates in the semiconductor in a region spaced away from the trenches when voltage is applied to the transistor” renders the claims indefinite.

3. The ‘195 Patent

a. All asserted claims of the ‘195 Patent are invalid under 35 U.S.C. §112, ¶1 for failing to meet the written description requirement with respect to the term “abrupt junction;”

b. All asserted claims of the ‘195 Patent are invalid under 35 U.S.C. §112, ¶1 for failing to meet the enablement requirement with respect to the term “abrupt junction;”

- c. All asserted claims of the '195 Patent are invalid under 35 U.S.C. §112, ¶2 because the term "abrupt junction" renders the claims indefinite.

4. The '111 Patent

- a. Claims 29-35 of the '111 Patent are invalid under 35 U.S.C. §112, ¶1 for failing to meet the written description requirement with respect to the phrase "adjusting a dopant profile of the plurality of heavy body regions;"
- b. Claims 29-35 of the '111 Patent are invalid under 35 U.S.C. §112, ¶1 for failing to meet the enablement requirement with respect to the phrase "adjusting a dopant profile of the plurality of heavy body regions;"
- c. Claims 29-35 of the '111 Patent are invalid under 35 U.S.C. §112, ¶2 because the phrase "adjusting a dopant profile of the plurality of heavy body regions" renders the claims indefinite;
- d. Claims 29-35 of the '111 Patent are invalid under 35 U.S.C. §112, ¶1 for failing to meet the written description requirement with respect to the phrase "resulting in avalanche current that is substantially uniformly distributed;"
- e. Claims 29-35 of the '111 Patent are invalid under 35 U.S.C. §112, ¶1 for failing to meet the enablement requirement with respect to the phrase "resulting in avalanche current that is substantially uniformly distributed;" and
- f. Claims 29-35 of the '111 Patent are invalid under 35 U.S.C. §112, ¶2 because the phrase "adjusting a dopant profile of the plurality of heavy body regions" renders the claims indefinite.

1 **5. The '947 Patent**

2 **a.** All claims of the '947 Patent are invalid under 35 U.S.C. §112, ¶1
3 because FIGS. 4A-4B and their associated text are new matter that
4 were introduced into the specification after the initial filing of the
5 application.

6 \\

7 \\

8 \\

1 AOS has not yet completed its investigation of this matter and reserves the right to
2 identify additional grounds that invalidate the six asserted Fairchild Patents obvious in connection
3 with further discovery, claim construction, the parties' exchange of expert reports, and as
4 appropriate under Patent L.R. 3-6.

5
6 Dated: March 3, 2008

MORGAN, LEWIS & BOCKIUS LLP

7
8
9 By: 

Andrew J. Wu

10 Attorneys for Plaintiffs and Counterdefendants
11 ALPHA & OMEGA SEMICONDUCTOR, LTD.
12 AND ALPHA & OMEGA SEMICONDUCTOR,
13 INC.
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

CERTIFICATE OF SERVICE

I am employed in the City of Palo Alto, County of Santa Clara, State of California, I am over the age of 18 years and not a party to the within action. My business address is 2 Palo Alto Square, 3000 El Camino Real, Palo Alto, California 94306. On March 3, 2008, I caused copies of the attached document(s) described as follows:

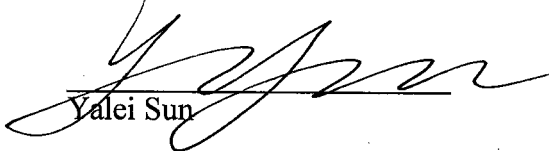
AOS'S SUPPLEMENTAL PRELIMINARY INVALIDITY CONTENTIONS FOR U.S. PATENT NOS. 6,429,481, 6,521,497, 6,710,406, 6,828,195, 7,148,111, AND 6,818,947 PURSUANT TO PATENT L.R. 3-3;

to be served on:

Eric P. Jacobs, Esq.
Igor Shoiket, Esq.
Matthew Hulse, Esq.
Leonard J. Augustine, Esq.
Priya Sreenivasan, Esq.
TOWNSEND & TOWNSEND
2 Embarcadero Center, 8th Floor
San Francisco, CA 94111

- ☐ (BY OVERNIGHT DELIVERY) I caused each such envelope to the addressee(s) noted above, with charges fully prepaid, to be sent by overnight delivery from Palo Alto, California. I am readily familiar with the practice of Morgan, Lewis & Bockius LLP for collection and processing of correspondence for overnight delivery, said practice being that in the ordinary course of business, mail is placed with the overnight delivery service on the same day as it is placed for collection.
- ☐ (BY FIRST CLASS MAIL) I caused each such envelope to the addressee(s) noted above, with postage thereon fully prepaid, to be placed in the United States mail in Palo Alto, California. I am readily familiar with the practice of Morgan, Lewis & Bockius LLP for collection and processing of correspondence for mailing, said practice being that in the ordinary course of business mail is deposited in the United States Postal Service the same date as it is placed for collection.
- ☐ (BY PERSONAL SERVICE) The person whose name is noted below caused to be delivered by hand each such envelope to the addressee(s) noted above.
- ☐ (BY FACSIMILE) The person whose name is noted below caused to be transmitted by facsimile each such document to the addressee(s) noted above.
- ☒ (BY ELECTRONIC MAIL) The person whose name is noted below caused to be transmitted by electronic mail each such document to the addressee(s) noted above.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed at Palo Alto, California, on March 3, 2008.


Yalei Sun